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## INFORMATION REPORT

## REPORT

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SUBJECT Research at the Institute for Physical Chemistry,  
Greifswald University

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Research is being conducted into the following subjects under the overall direction of Professor Hauffe in the Institute for Physical Chemistry (Physikalisch-Chemisches Institut) at Greifswald University:

- a. Semiconductors of mixed oxides.
  - 1) The systems  $\text{TiO}_2 + \text{GaO}_3$ ,  $\text{Cr}_2\text{O}_3$  and  $\text{WO}_3$ .
  - 2) The systems  $\text{ZnWO}_4 + \text{Li}_2\text{O}$  and  $\text{Cr}_2\text{O}_3:\text{NiWO}_4 + \text{Li}_2\text{O}$  and  $\text{Cr}_2\text{O}_3$ .
  - 3) The systems  $\text{ZnO}_2 + \text{In}_2\text{O}_3$ .
  - 4) Development of a control semiconductor (Regelhalbleiter) for the Dralowid Werk, Teltow, VVE RFT.
- b. Measurement of adsorption by mixed oxides for the purpose of explaining the mechanism of adsorption.
- c. Investigations into the stationary condition of mixed oxide catalysts in heterogeneous reactions.
- d. Determination of the emission of electrons from hot mixed oxide cathodes.
- e.
  - 1) Investigation of the mechanism of oxidation of iron to  $\text{FeO}$  in mixtures of  $\text{CO}$  and  $\text{CO}_2$  at high temperatures.
  - 2) Investigation of the effect of the presence of other vaporized metallic oxides on the oxidation of metals and alloys of metals.

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- f. Investigation of the mechanism of the reduction of oxides in the presence of other oxides.
- g. Investigation of the mechanism of the formation of electro-chemical surface layers.
- h. Further development of the theory of diffusion.
- i. Investigation of electro-chemical passivity.

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